



REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 1-8, 13-18, and 21-22 are now pending in this application.

Applicant would like to thank the Examiner for the careful consideration given to the claims.

Rejection of claims 1-2, 4-6, 13-14, 16-17, and 21-22 based on Description of the Prior Art

Claims 1-2, 4-6, 13-14, 16-17, and 21-22 are rejected under 35 U.S.C. 102(a) as being anticipated by the Instant Application's Description of the Prior Art ("Description of the Prior Art"). This rejection is traversed for at least the following reasons.

Claim 1 has been amended to recite "the narrowest distance between the first wire and the second wire but not including the first and second wire is more than or equal to $5\mu\text{m}$." Claim 13 has been amended to recite a similar feature. The Description of the Prior Art does not teach or suggest this feature. In particular, FIG. 6A shows and clearly labels a distance of less than $5\mu\text{m}$, as acknowledged by the PTO. (See page 8 of the Office Action.)

In the "Response to Arguments" section of the Office Action, the PTO has also stated that one with ordinary skill in the art would understand the distance of FIG. 6A to mean "that the narrowest distance between the two wires is, for instance, $4999.9 \times 10^{-10} \text{ m}$ " and by taking the shortest conceivable width of either surface wire to be $1.06 \times 10^{-10} \text{ m}$ (the width of a single atom) and adding this width to the indicated distance of FIG. 6A, the narrowest distance will result in a sum total wire distance of "more than or equal to $5\mu\text{m}$." However, the PTO is including the surface wires themselves in the calculation of the distance between the first and second wires. Although the PTO's interpretation is improper, claims 1 and 13 have been amended to make clear that the distance between the wires does not include the wires themselves, and that the distance must be "more than or equal to $5\mu\text{m}$." FIG. 6A does not teach such a distance. Thus, claims 1 and 13 are not anticipated or suggested by the Description of the Prior Art.

Claims 2 and 14 depend from and have all the limitations of either claim 1 or claim 13, and are allowable for at least the reasons set forth above without regard to the further patentable features contained therein.

As to claims 4 and 16, the PTO has rejected these claims citing several different arguments supporting the rejection that the Description of the Prior Art anticipates the features of these claims. These arguments include: (1) FIGS. 6B and 6C disclose an ion layer covering the entire surface of a wire; (2) FIG. 10 shows a liquid crystal layer 50 covering the entire exposed surface of the wire; (3) FIG. 10 shows a counter substrate 49 covering the entire exposed surface of the wire; and (4) the counter substrate 49, the liquid crystal layer 50, and the spacer 51 “would reasonably be constructed in combination by an artisan as constituting a layer covering the wire;” and (5) FIG. 10 shows a spacer 51 covering the entire exposed surface of the wire 47 with “covering” to mean “to place over, so as to protect from the common electrode.” Each of these arguments will be addressed, in turn, in view of the amendments to claims 4 and 16.

As to argument (1), claims 4 and 16 require “an insulator in direct contact with the entire exposed surface of at least one of the first and second wires.” The ion layer 34 of FIGS. 6B and 6C is a conductive layer, and thus cannot be an insulator.

As to argument (2), claims 4 and 16 require a liquid crystal layer. Because the claims require a liquid crystal layer and an insulator, the liquid crystal layer 50 cannot be considered to be the insulator or part of the insulator.

As to argument (3), claims 4 and 16 require that the insulator be “in direct contact with the entire exposed surface of at least one of the first and second wires” and “the entire exposed surface of the at least one of the first and second wires is isolated from the liquid crystal layer by the insulator.” The counter substrate 49 cannot be considered to be the insulator because it is not in direct contact with the entire exposed surface of the wire 47 and it does not isolate the wire 47 from the liquid crystal layer 50.

As to argument (4), claims 4 and 16 require a liquid crystal layer and “an insulator in direct contact with the entire exposed surface of at least one of the first and second wires, wherein the entire exposed surface of the at least one of the first and second wires is isolated from the liquid crystal layer by the insulator.” As previously mentioned, the liquid crystal layer 50 cannot be considered to be part of the insulator. The counter substrate 49 and the spacer 51 cannot be considered to be the insulator because they are not in direct contact with

the entire exposed surface of the wire 47 and they do not isolate the wire 47 from the liquid crystal layer 50.

As to argument (5), the spacer 51 cannot be considered to be the insulator because it does not isolate the wire 47 from the liquid crystal layer 50 and it is not in direct contact with the entire exposed surface of the wire 47.

For at least these reasons, claims 4 and 16 are not anticipated or suggested by the Description of the Prior Art, and are thus allowable.

Claims 5-6, 17, and 21-22 depend from and have all the limitations of either claim 4 or claim 16, and are allowable for at least the reasons set forth above without regard to the further patentable features contained therein.

For at least these reasons, favorable reconsideration is respectfully requested.

Rejection of claims 3, 8, 15, and 18 based on Description of the Prior Art and Kwon

Claims 3, 8, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Description of the Prior Art in view of U.S. Patent 6,486,930 ("Kwon"). This rejection is traversed for at least the following reasons.

Claims 3, 8, 15, and 18 depend from and have all the limitations of either claim 1, 4, 13 or 16. As previously mentioned, the Description of the Prior Art does not teach or suggest "the narrowest distance between the first wire and the second wire but not including the first and second wire is more than or equal to 5 μ m" as required by claims 1 and 13 or "a liquid crystal layer disposed between the exposed surface of the first wire and the exposed surface of the second wire; and an insulator in direct contact with the entire exposed surface of at least one of the first and second wires wherein the entire exposed surface of the at least one of the first and second wires is isolated from the liquid crystal layer by the insulator" as required by claims 4 and 16. Kwon fails to cure these deficiencies. For at least these reasons, favorable reconsideration is respectfully requested.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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